

Thesis for a Thesis

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Well we know where were goin'
But we don't know where we've been
And we know what we're knowin'
But we can't say what we've seen
And were not little children
And we know what we want
And the future is certain
Give us time to work it out...

My lecture today will question the nature of a thesis project for an undergraduate architectural education. The topic of my lecture – the nature of a thesis – is probably of concern to many of you, either presently engaged in thesis preparations or those of you who will be thinking about your topics in the next few years. I will first question the nature of what a thesis may be and then propose one approach to making a thesis. The third part of the lecture will offer two examples.

Allow me to begin by telling a story...

There was once a professor of sculpture, a lover of pure design. After staying many years in Rome he was truly at the height of his career. At the very moment that he was to make his great fortune in the world, he fell into a violent and passionate love for a woman that he believed could serve as his ideal model. Unable to possess the woman, he killed her.

The sovereign, an aggressive promoter of the arts, was unsure of an appropriate sentence. Amongst the officials in his ministries was one who came forward with a completely new punishment in mind. He reminded the Majesty of one of his possessions in the West Indies—an island completely inhabited by *Caramogi*—men and women whose members were completely deformed. The minister argued that confining to such an island one with a passion for perfection in the arts would be the worst possible sentence. The reality of continually finding himself in the midst of the most abominable sights would equal death. The sovereign accepted the suggestion. This would be the sculptor's destiny.

Immediately upon disembarking, the artist saw a group of dwarfs. A few amongst them had huge legs while others were twisted and bent out of shape. Some of the women had heads that were similar to their bellies; others had breasts larger than their heads. Knowing how terrible it would be to see such a vision just one time, one can easily imagine how day after day the sculptor became more desperate to see a body of normal proportions. To be the only man of proportion on the island attracted the inhabitants, especially the women.

The sculptor was at the height of his delirium when the wife of the ruler on the island, who had been in the habit of watching him while he undressed, let herself into his apartment. She caught him just as he was completely naked and immediately declared that she had always felt passionately for him. The woman was huge, and constantly drenched in sweat. She smelled so bad that when she approached, the sculptor was not able to breathe. Her nose was truly awesome, only her mouth was larger. Three people would be able (if they dared) to kiss her at the same time without knowing the others were there. Her hands were longer than her fingers, her feet longer than her legs, and she was completely lacking a neck. Her voice was a deep baritone. Simply put, she was terrible. The sculptor could not flee without great risk of her accusing him of mistreating her. At the lowest moment of his depression of spirit, and thinking of nothing but the disastrous beauty that had caused his misfortune, he decided right then to kill himself. Fearing lest the continual sight of revolting eyes, deformed physiognomies, and ridiculous figures cancel his memory entirely—visions of the gracefulness of the Venus of the Medici, of the Hermaphrodite of the Borghese, of Peto and Avra of Piombino, of Gladiators, and many other sublime statues of the Greeks, the Romans, and the Moderns as well. He feared, all would be lost.

“Oh yes!” he exclaimed, his face wet with tears. “Oh, yes, I feel the idea of beauty abandoning me. These ghosts cancel it day by day. But wait, what is this?” In the moment of his most intimate pain, raising his eye to the face of a the young girl, though monstrous, he saw an eyebrow of the finest Oriental taste, just a bit arched. “And what is this?” He thought to himself. “Am I able, in the center of all of this deformity, to rejoice?” The sculptor asked the girl if he could draw her eyebrow; but of course, not the eye. After some days he found, in another monster, a round heel that was bony on the top but which he could not find more beautiful at the base.

In the hope to be able to reveal the archetype of beauty, which the sculptor had in mind for a man and a woman, he had looked with passion and found gold in dung. He was then able to recover from the most diverse parts, what was beautiful for everyone, to create a whole that was harmonic and perfect.

The story was told by Carlo Lodoli to a group of Venetian students of architecture in the mid eighteenth century. It echoes the ancient story of Xeuxis who combined the likenesses of five maidens to paint one that would be the most beautiful and comparable but not in competition to a Goddess. It was appropriate then and I would argue now as well. Lodoli was essentially questioning how one might make something that is meaningful in a world that lacked a common world view.

Certainly the previous years of economic growth, only recently checked, have led to an amazing amount of building from the work in China to that of Dubai. This extended cycle of world wide economic growth, I would argue, over the past 15 years has allowed many architectural caramogi to be built. The incredible variation of recent architecture, even in one place such as Dubai, prompts the question of how to make meaningful architecture? It seems as if anything is possible and buildable. So, what does one do? How does one make architecture that is meaningful and not only fashionable? When anything possible and it seems that everyone's opinion matters as much as the next I will argue that it is most vital to have a position, to have a thesis. But what does this mean for your thesis project?

Thesis as studio project

A thesis is typically considered to be a comprehensive project that concludes the professional education of an architect. It is often directed by interests of the student and concludes in some sort of self-publication. The thesis studio is usually longer in duration with some time spent doing "prep" or research. But what makes a good thesis? How should one go about forming their thesis? Does the scale of the project determine the relative comprehensive-ness of the project? What is the role of "research?" Must the work be project based? Further, how should a critic assess a thesis project? For this discussion, I will rule out the possibility that a thesis is solely a written document, or a research paper. I will discuss the thesis as a studio based project.

As we know, the studio as a model of education is distinct from many other disciplines – like law, medicine, business, or engineering – and although it can be quite rewarding on many levels it may also be an extremely unconstructive endeavor. The amount of time spent in studio typically far outweighs that spent for other courses. The dedication that students bring to the studio is remarkable, yet much of the time spent in studio is not always productive. Students often complain of not knowing what is expected of them and so much of the time is spent thinking about what they think the professor wants to see. Another version of this is that the students are crushed by the

workload, tasks, demands or expectations of their instructors and fail to reflect on their completed tasks. In either case, the work is almost invariably driven by the students' own creativity and imagination – again unlike law, medicine, business, or engineering for example, where the interpretation and inquiry into case studies and cadavers is much less based on personal introspection than it is on established traditions and methods of inquiry. The extremely personal nature of the architectural studio can make reviews either a devastating or extremely empowering process. Further, the often-hermetic nature of the studio offers certain latitude for students to develop their work in relatively safe surroundings. This environment may also foster the cult of personality that develops around more popular professors that harkens back to the very roots of education but can also lead to an entourage of disciples who have no incentive to inform the Emperor that he or she is no longer wearing any clothes.

The thesis project magnifies all of these issues. A somewhat normative version of a thesis project is that it is a large-scale project, often with an agenda. It is often seen as a mirror of practice in which the professor acts as the more experienced and advanced designer. There is the illusion of a “real” project, though the reality could not be further from the truth. A thesis project rarely, if ever, goes beyond very initial planning phases and almost never is a project able to be built from final drawings. Although, drawings that are often presented at final reviews tend to look more like presentation drawings than working drawings, it seems clear to me that the context of a final review in which a student presents to a panel of critics is simply different than the interchange between client and architect, or between architect and consultants. Following this logic, might the status of representation be questioned? Indeed, there are many differences between the studio and an office environment to include: lack of client participations and negotiations, funding issues, consultant relationships, time constraints, as well as the economic reality of running an office. To assume then that the same parameters exist and that the professor is able to act as both client and lead designer is dubious at best. So how does one frame a thesis if it is not simply a “museum” or “lab building?” In the interest of time, I will not discuss how a thesis may be assessed or evaluated, but I will now briefly describe a few models that offer a range of intentions regarding the formation of a thesis. I will limit my discussion to architecture schools, though it is interesting to look beyond our walls to see how other disciplines deal with thesis projects. I will also save that for another conversation.

Model of the Sciences

The first model I will describe is that of the modern sciences, that of a research driven thesis. Here, students work with a professor who is engaged in a much larger research project. They act as research team who supports the professor as lead investigator. The example I show you is from the

Centre for Architectural Structure and Technology in Winnipeg Manitoba, led by Mark West. Other examples, such as those at the Bartlett, MIT and elsewhere, exist as well. Here students are able to work alongside, or at least under, Mark West in a very well appointed workshop to develop techniques of fabric formed concrete construction. I find the work is fascinating on many levels, and to engage with Mark in your thesis offers the advantages of ready made questions, great funding and support. However, the research is always his and it is difficult to emerge from the long shadow of the master. Further, as a first professional degree, the research seems overly specific and students are not always prepared to engage in research that is already quite thick. The results tend to look very similar and predictable or even superfluous.

Thesis as Manifesto

The next model of thesis is that of a manifesto. The most precise description I have found of this is based in the work of Gregory L. Ulmer. In his book, *Heuristics: The Logic of Invention*, he offers a theory of method to writing a manifesto that has been adopted in some schools of architecture. Ulmer uses the acronym CATTt to explain his ideas: Contrast, Analogy, Theory, Target, tale.

C Contrast

Most manifestos are reactions to something and this is the basis for Ulmer. The thesis begins with a contrarian position; you have to want a revolution. There is a lot of room to define what this means, it may be the Socratic dialogue or simply the response “I know you are but what am I.” In either case a position is stated that is in contrast the dominant model. The obvious problem of this is that everything new very quickly becomes the most recent old thing. Once it has been consumed, the meaning inevitably changes and often very quickly. One’s position, therefore, must be in constant flux or you simply become fodder for the next revolution.

A Analogy

To develop your thesis, you borrow methods from other contexts – philosophy, natural sciences, etc. Architects love this one; we are incessantly borrowing from other fields of inquiry. Tom Wiscombe, for example of the LA based emergent architecture has made a practice based on a very self-aware biomimicry. Some of you are probably old enough to remember architecture’s fascination with the literary and philosophical movement of deconstruction. While Derrida and others seemed amused at all of the attention they were getting from architects and others. In the end, we probably misunderstood the whole point. There are, however, more positive contributions, for example the interest in materials and methods of fabrication from other industries, which has enriched the work of many 20th c. architects. I show you just one example, that of the Eameses.

T Theory

The third category, theory, involves the use of references back to clearly established or key notions from famous philosophers in your work. Every revolution needs a Rousseau, or Marx. For Stephen Holl, it was Merleau-Ponty. We all know of his museum in Helsinki – the Chiasma – a fantastic project, that in reality has very little to do with how Merleau-Ponty, or even Descartes understood the notion of the Chiasma. It does, however, make great press when the architect refers to buildings in mystical and magical terms derived from philosophy. If you follow Holl's work, you know he likes to do this a lot.

T Target

The next is the target, the audience. This answers the question; for whom are you making your thesis? This is a loaded proposition. Is the audience a potential employer? Your thesis advisor? Are you engaging in the current discussion of architectural theory? (Please tell me what that is if you know it.) Or, is your audience the always unspoken rules that exist at every school of what a "thesis" might look like? As you will soon find out, the new and novel very quickly become out of fashion.

t tale

The product of Ulmer's thesis is the tale. This is where all of the positioning of the previous topics gets translated into a specific field of inquiry. If we apply Ulmer's theory to architecture, this is where all of the theory becomes a drawing. This is always the difficulty. Students inevitably overthink projects and have real difficulties translating ideas into architecture.

While there are many positives to Ulmer's thesis as manifesto to include a rigorous and clear method (as anti-method) to follow, and the analogic inquiry into other fields that may lead us to perceive architecture more critically or even meaningfully, there is always the issue of a thesis getting "lost in translation." It is not entirely clear to me how phenomenology, the morphology or jellyfish, or exemplary works of fiction, for example, translate directly into making architecture. Projects typically fail when they rely too much on the references and are not able to stand on their own. Further, the contrarian nature of the thesis is forever connected to that which it proposes to work against. It is only the other side of the same coin. I can only imagine that there are more productive ways to think about contemporary issues in architecture.

“post-Vanguard” Thesis

The next model takes the opposite approach. I will refer to it as the “post-vanguard” thesis. Michael Speaks, former director at SCI-Arc and current Dean at the University of Kentucky has argued that architects should focus on design intelligence to overcome impediments such as theory. Rather than struggling through Derrida, Heidegger or Nietzsche, architects should, according to Speaks, accept the consumerist tendencies of our contemporary culture and just make stuff. Highly dependant on approaches such as scripting, parametric modeling, and fabrication techniques such as CNC Machines, 3-D printers and laser cutters, students are able to create incredible variations of morphological prototypes. Such prototypes can create feed loops of iterative form making in which issues such as programming, structure, mechanical systems, site conditions, environmental concerns or other issues of architecture are all post rationalized to match the selected form. In this context, innovation is praised, as is novelty. However, one still must decide which form, amongst many, is best. This is often rationalized with informational diagramming that has the tendency to reduce the potentially rich experience of architecture to a spreadsheet. Further, the leap to built work is always problematic – form must be translated into materials. Joints change all those sexy surfaces and the scaling from the image to the built work inevitably affects the capability of structural systems and materials.

One example of this is Gregg Lynn’s Blob wall, recently constructed in an advanced studio by students at SCI-Arc and sort of presented at the biennale in Venice. According to promotional material the: “Blob Wall is a modular wall system made of lightweight honeycomb material, designed by architect Greg Lynn. The material is a low-density, recyclable and impact resistant polymer. It is a free-standing wall that has Interior/Exterior applications. Each piece fits into each other like a jigsaw blocks, to achieve a whole range of 3d configurations. The weird shape was achieved with the use of a CNC machine.”

The rendering demonstrates the intentions, however, the reality could not be further from the truth. The blob bricks did not achieve the promised complexity of form, and are not in any real way structural. The extensive use of quite toxic glues seems to contradict any notions of sustainability.

Thesis as Demonstration of Expertise

Recently, Jeffery Kipnis has proposed that such architectural research may lead to expertise, but Kipnis stops short at explaining how such expertise may be taught or even studied in the context of a thesis. While it seems a good goal to be “an expert,” one might ask, what does that actually mean for architecture? For Kipnis, it means, as in the sciences, being aware and involved in the most contemporary problems and arguments in architecture. This is easy for him to say, as he is on

personal terms with most of the other “experts.” Such experts have attended the same few schools, had the same few professors, and are now the ones defining the same few issues and concerns of architecture. One result of this is that the self-selecting architectural “experts” often become the arbiters of taste, defining what is good and bad. This leads to my next sort of thesis, that is, thesis as the development of a personal style.

Thesis as Development of Style

I am not being facetious, here, there is in fact a serious argument being made that the nature of thesis is determine the style in which you express your work. This tends to mimic the “style” of your professor, but such mimicry has the added effect of being connected with those “experts” that I just mentioned. In many other fields, one’s personal vision is embraced, commoditized, and sold. One might argue, why should architecture be any different? Hernan Diaz Alonso refers to this as an architecture that has more “cowbell.” Christian, from last season’s project runway might refer to this as “fierce.” As well, it easy to argue to that style can get you work. Bilbao is of course an obvious example of this, but so too is the Bastille Opera House in Paris. The project was a result of a competition in the early 1980’s and the French judges were confident that they had chosen a project by the then fashionable architect, Richard Meier. However, the project was not proposed by Meier, but by a relatively young and very much inexperienced architect, Carlos Ott, a Uruguayan who was living in Toronto at the time. The French were obliged to award him the project and begrudgingly did so.

Such development of style as the basis of a thesis is unfortunately still entirely dependant upon architectural critics to claim the work is good or not good. This often elevates critics to become the leaders of certain style tribes and I would argue does a dis-service to students. In the end it dissolves the conversation regarding architecture to either “I like it, or I don’t.”

Critical Thesis

So, in the hopes that an architectural thesis may be something more than a challenge on Project Runway, I will wager that there is still the possibility for a critical thesis.

I use the word “still” because the past ten years has seen a lot of academic bickering around the question of a “critical” architecture. I will not rehash all of the arguments here but I will mention a few key points. Two gangs of academics quickly formed around the question of what a critical architecture might be. One side was represented Michael Hays and Peter Eisenman, both heavily dependent upon the work of Manfredo Tafuri. Tafuri, after opening the pandora’s box of what

critical architecture might be, returned to Venice, Renaissance Venice to be exact, and left many to wonder what they were supposed to be doing.

Michael Hays stands by the idea of a critical architecture, but admits that the meaning of the term has become ambivalent. His most clear statement on the nature of a critical architecture was proposed in a constantly referred to article from the late 1980s. In the article, Hays distinguishes between a cultural and formal reading of architecture. He uses the work of Mies van der Rohe to exemplify a critical project that is not only culturally or formally bound, but rather may be both. He cites the Friedrichstrasse tower projects as oppositional, resistant, and able to withstand globalizing and consumerist tendencies as well as the contemporary formal vocabulary. In this way, the work is critical.

The other side, represented by such heavyweights as Rem Koolhaas, Michael Speaks, Sarah Whiting and Robert Somol, were tired of all the posturing and pseudo-philosophizing that they saw as project of the 1970s and 80s. Theory, they claim, is no longer a viable model for architecture and should be abandoned. Koolhaas landed the first punch by claiming in 1994 that,

“Maybe some of our most interesting engagements are uncritical, emphatic engagements, which deal with the sometimes insane difficulty of an architectural project to deal with the incredible accumulation of economic, cultural, critical, but also logistical issues.”

In essence, the messy reality of making a building always trumps any critical position. That Peter Eisenman recently designed a football stadium for the University of Phoenix, might be indicative of such a statement, but it also might simply be a sign of how good the economy was. Michael Speaks, perhaps the most-clear advocate for what he refers to as a post-vanguard architecture, calls for a new design intelligence that embraces all that Hays intends to oppose. In various essays, Robert Somol and Sarah Whiting have proposed that architecture might be more projective than critical. Sylvia Lavin has argued for a performative architecture in which the form relates to affect of sensation rather than reference. Both positions are not oppositional, but rather look to the autonomy of the discipline to propose an innovative response. George Baird in a review of such positions cautions that these approaches may become the “merely pragmatic” and “merely decorative” very quickly. Thinking back to Dubai, one may tend to agree.

Many of these positions are relative to built work. As I argued earlier in this paper, the thesis studio is not a mirror of practice. Nor does it necessarily need to respond to the economic will of a client. As such, it seems an appropriate avenue for exploring what a critical architecture might be. Rather

than the poles of culture and form as proposed by Hays, however, I propose that a critical thesis relates to culture and to making.

At the risk of over-simplifying the topic, I will describe a proposal for a thesis through the geometric form of the *vesica piscis*. Euclid first described this form in his own geometric demonstration of the creation of an equilateral triangle. Allow me to demonstrate:

A point is made.

A line is extended from that point

A circle is inscribed using the point as the centre and the line as radius.

A similar circle is drawn using the existing radius line but shifting the center point.

Connecting the initial line drawn and the intersection of the two circles generates an equilateral triangle. This is a geometric proof of such a triangle, which is the basis of all Euclidean geometric forms.

I will very briefly explain how I understand this within the realm of an architectural thesis:

A student forms a question

The thesis should begin with a question, not a concept, or only an interest. One should be asking something, not simply thinking about something. The question should be personal; you should have a stake in your work. Next, the student looks to others, who have asked similar questions. This is not about collecting case studies, but working to uncover the intentions, the struggles, the questioning, and the responses of others who have asked similar questions. It is essential that other work be viewed within its own world and not with a retrospective glance. Through historic and philosophic dialogue a question is fleshed-out. It is essential that the question becomes specific and is demonstrated through making, through action, not simply through abstract thought.

I will now offer two examples, one contemporary, the other less so, that demonstrates my position.

GB Piranesi

Piranesi, as we can see from this image of an etching was Venetian and an architect. I like this image as it shows Piranesi's likeness as well as a whole lot more. He is shown as a Roman statue, complete with missing arm and neat Caesar haircut made famous by George Clooney. If we look a bit closer, we can see the boot of the Italian peninsula and the Mediterranean Sea as clouds above his head.

His story is well-known as is his fiery temper, as evidenced by the quote. He was born outside of Venice, trained as a mason, probably educated by his brother, a Carthusian monk. In 1740, he was appointed as draughtsman to Marco Foscarini and traveled to Rome. Rome in the 40's offered the young Piranesi a wealth of visual candy - antiquity (the ruins) and modernity. There were new projects, including the Spanish Steps, Trevi Fountains, but Piranesi was most moved by the work of the ancient Romans. Soon after his arrival to Rome, Piranesi entered into the studio of Guiseppi Vasi, and begins to etch Vedute, or *topographical views* of Rome. Piranesi could clearly etch, well.

The question for Piranesi was, very generally; how does one make meaningful architecture? He found his answer in the ruins. A quote from Piranesi explains:

"These speaking ruins have filled my spirit with images that accurate drawings, even those such as the immortal Palladio, could never have succeeded in conveying, though I always kept them before my eyes. Therefore having the idea of presenting to the world some of these images, but not hoping for an architect of these times who could effectively execute some of them - whether for fault of architecture itself, fallen from the highest perfection to which it had risen in the period of the greatest splendor of the Roman Republic and in the times of the all powerful emperors who succeeded it; or whether the fault of those who should have been patrons of this most noble art. The fact is that we have not seen buildings equaling the cost of a Forum Nerva, of an amphitheatre of Vespian, or of a Palace of Nero; therefore, there seems to be no recourse than for me or some other modern architect to explain his ideas through his drawings, and so to take away from sculpture and painting the advantage, as the great Juvarra has said, they now have over architecture, and similarly to take it (architecture) away from the abuse of those with money, who make us believe that they themselves are able to control the execution of architecture."

There are a few important points here. One is that a meaningful architecture may be found in the study of the ruins may lead to meaningful architecture and second that the production of architecture may be drawings and not buildings. In this way, the architect is more free to work. Piranesi exemplified this quote in much of his production. I will describe only one project as it relates to my thesis; that is the *mostra* or head fountain of the water system terminating on the Esquiline Hill. The project questioned the nature of the ruin, a utilitarian project from ancient Rome that was, in the 18th c., a ruin. He does not, however, record the ruins as they existed, he opens up to the potential past that may be inherent in the work. His approach was quite original, in that he showed the means of construction, tools as well as materials - all with captions - possibly to

celebrate the super-human effort required in Roman buildings. Piranesi shows the building as it existed and then shows a series of other drawings to situate the building.

This seemingly boring study of utilitarian achievement, becomes a celebration of architectural complexity, even down to the way you form a pipe, the way water would be filtered, and the various nozzles used for various pressures. Through this and other studies, he asks - if the hidden utilitarian parts of all of these buildings is so amazing, how much more incredible could the more public parts, destroyed by the fire in 64 AD under Nero. Piranesi looked back to Ancient Rome to discover a way of making meaningful architecture today.

When we then look to the Carceri etchings, we can be sure they represent more than an architectural delusion. Materials are understood and represented truthfully; one's experience of an actual building is revealed in the multiple perspectives; we even find a critique of modern Roman politics. In each plate we have reached a point where the etching does not re-present architecture, but *is* an architectural experience in itself.

Doug Darden (1951-96)

Doug Darden, a more recent American architect also questioned the meaning of architecture, and in ways similar but also distinct to Piranesi. I will describe one project in particular, the Oxygen House. The project begins with a description of the client, Abraham, who must live in an oxygen tent. Abraham had worked for the railroad his whole life. One day after a flood, the train jumped the track and Abraham's lung was punctured by a stray piece of metal, thus requiring the oxygen house. Three years after the incident, Abraham purchased the piece of land where the accident occurred and commissioned a house to first allow him to live and then be his final resting place.

All of this, of course, is a fiction. But it is an incredibly believable fiction. It is easy to see how the house operates as a breathing device and then transforms into a tomb. We can see all of the structure and materiality of the house, the ambulance, the oxygen tanks, the couch Abraham rests on, the shower curtain, and the lift under which he is eventually buried. Perhaps most disturbing is the xray of the lung. Darden died just after the publication of his work from Leukemia. A chest x-ray is a routine part of the evaluation for Leukemia. I have been told that the image is of Darden's lung, though I have not been able to confirm this. Clearly he had a personal stake in the work.

Conclusion

Both of these projects reveal qualities that I argue are indispensable to a critical thesis. I will conclude with five points:

1. The first is that both Darden and Piranesi begin with a question and further, that both have a stake in the questions. The importance of one's own questions are grounded in historical inquiry and revealed through making. It is the duty of the student to take ownership of their work. It is their responsibility to find their own way of working. It is their task to frame their own questions. This is not about "concept." It is about asking a good question.

2. The next is that there is a dialogical relationship with the discipline and history of architecture. Darden looks to ten tenets, Piranesi to the actual ruins around him. Both are working through architecture, and do not rely upon philosophy, biology, or another unrelated field, to supply their thesis with meaning. The relationship to the discipline is a metaphoric one, synthesizing heterogeneous elements into a personal response. Within this playful *fusion of horizons*, history is seen as a guide to action and as a non-nostalgic way of living fully and in the present. New work is created within the framed groundwork of the historical dialogue. This is not historical kitsch as the work derives its meaning in this world and not solely as a referent to a historical context. The fusion of horizons between the past and the present, literally refigures new meaning but novelty is not the aim.

3. The third quality is that both Darden and Piranesi are extremely aware of the technical components of their projects. Piranesi's imaginative demonstration of a potential past may have been proven by contemporary archaeologists to be not entirely factual, the point is that he was able to open up an entire world from the collection of a few fragments. Darden's work, though fantastic, is of course also extremely aware of the tectonic reality of materials.

4. Next, both architects are very aware of the medium in which they work. Both recognise that architects make drawings, not buildings. The drawings produced, however, are not analogically related to a future work. Neither are representations of a future project to be built, rather, the drawings are the architecture.

5. The fifth quality is that both architects combine text and drawing to demonstrate the work. It is important to note that narrative (as description and as fiction) is essential to both architects and each include text in the projects. In this way, a world is constructed, perhaps fantastic (as in the

case of Darden), perhaps banal (as in the case of Piranesi's study of the water works). One of the reasons we may not fully understand the Carceri is that they have very little text. The narrative helps to plot out the drawings. The completeness of the world that is made, then, through drawing, technical awareness, and narrative may then account for the comprehensive nature of the thesis.

I would claim then that each of these attributes combine to form what my professor used to refer to as "possible realities, and real possibilities." A truth is revealed in the process of making, of speaking, of *architecture-ing*. This process is reflexive in that it shows rather than proves; it manifests rather than simply describes. The result of such inquiry privileges theory over information, drawing over diagram, embodied experience over information, meaning over affect. And finally, such a thesis may well encourage a desire to develop one's own approach to making meaningful architecture that can continue through a career of lifelong learning.

I will end there, thank you for your time and good luck with your thesis.

And you may find yourself living in a shotgun shack
And you may find yourself in another part of the world
And you may find yourself behind the wheel of a large automobile
And you may find yourself in a beautiful house, with a beautiful wife
And you may ask yourself
Well...How did I get here?
And you may ask yourself
What is that beautiful house?
And you may ask yourself
Where does that highway go?
And you may ask yourself
Am I right? ...am I wrong?
David Byrne, Architecture School dropout